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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,868	12/03/2004	Dorothy French	146392001900	1564

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EXAMINER

HIRIYANNA, KELAGINAMANE T

ART UNIT	PAPER NUMBER
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1633

MAIL DATE	DELIVERY MODE
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07/21/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/516,868	Applicant(s) FRENCH ET AL.	
	Examiner KELAGINAMANE T. HIRIYANNA	Art Unit 1633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10,11,179,181,182 and 187-209 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10,11,179,181,182 and 187-209 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/06/2009 has been entered.

Applicant's response filed on 04/06/2009 in response to office action mailed on 10/10/2008 has been acknowledged.

Claims 1-9, 12-178, 180, and 183-186 were previously cancelled.

Claims 10-11, 179, 181-182, 189-190, and 209 are amended.

Claims 10-11, 179, 181-182 and 187-209 are pending and are examined in this office action.

Applicants are required to follow Amendment Practice under revised 37 CFR §1.121. The fax phone numbers for the organization where this application or proceeding is assigned is 571-273-8300.

Withdrawn: Objection to Claims 10, 11, 189, 209 179 and 190 for reciting alternative terminology "FGF19" and "FGF-19" is with drawn in view of Applicants appropriate amendments to cited claims.

Withdrawn: Claims 10, 11, 181, 282, 189 and 209 and their dependent claim rejection under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention is withdrawn n view of Applicants appropriate amendments to cited claims.

Claim Rejections - 35 USC § 112 (1st paragraph)

The following is a quotation of the first paragraph of 35 U.S.C. 112:

"The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention."

Claims 110-11, 179, 181-182 and 187-209 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while enabling for a method of screening for biologically active agents that modulate hepatocellular carcinoma (HCC) by administering a candidate agent to a FGF19 transgenic mouse wherein said transgene is expressed under the control of MLC promoter in a skeletal muscle cell and wherein said transgenic mouse has a phenotype of developing HCC and for said HCC cells derived from said mouse, does not enable any cells from said mouse. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

The scope of instant invention encompasses a method of screening for biologically active agents that modulate hepatocellular carcinoma (HCC) using a FGF19 transgenic mouse with a phenotype of developing a hepatocellular carcinoma wherein FGF19 transgene is expressed in a muscle cell under the control of a promoter and further using any cell derived from said mouse at any stage of its development for the same. However, the specification only provides guidance and/or evidences regarding generation of a transgenic mouse with a phenotype of HCC owing to FGF19 cDNA expression driven by a MLC promoter in a skeletal muscle, and further this ectopically expressed FGF19 (in muscle cells) causes HCC in liver cells of said mouse at later stage of development.

The specification only provides guidance regarding generation of a transgenic mouse that develops HCC owing to an expression to FGF19 in Muscle cells. Further he application does not disclose that FGF19 is expressed in any and/or all cells of said mouse and cause HCC in any cell of said mouse at any stage of development of said mouse. Hence only muscle cells expressed said FGF19 transgene and this ectopically expressed FGF19 in muscle cell some how induces HCC in liver cells of said mouse at a later stage of said mouse life cycle. Thus all the cells (e.g., brain, kidney etc) obtainable

from said mouse will not be able acquire a HCC phenotype firstly because they are not hepatic cell types and secondly because they are themselves not able to express said transgene under MLC promoter. Further even the liver cells from said mouse, obtained at any stage of their development, will be able to acquire a HCC phenotype firstly because they do not express said FGF19 transgene themselves and secondly because HCC in said host transgenic mice occurs only at the later stages of life cycle of the said transgenic mouse. Thus one of skill in the art would find the invention unpredictable and undue experimentation to practice the claim in its full scope.

Response to Applicant's arguments in of 04/06/2009:

The Applicant amends the claims to FGF19 transgenic mouse that expresses the transgene in skeletal muscle cells under control of "the gene promoter" that is linked to the FGF-19 transgene. The Applicant further argues that the invention as instantly claimed is enabled for their broad scope of using any promoter in muscle cell and further enabled for the broad scope of using any cells from said mouse at any stage of life cycle for in vitro HCC screening assays.

The Applicant's arguments are however, found not persuasive. . The Applicant should file a declaration regarding the same indicating that the use of any promoter linked to FGF19 transgene in a muscle cell would result in a mouse with a phenotype of Hepatocellular carcinoma (HCC). Since the specification fails to disclose or describe other broadly claimed gene promoters in a muscle cell that drive FGF19 transgene expression in skeletal muscle and cause hepatocellular carcinoma. Further the as filed specification does not support the broad claims of using any cells from said mouse and obtained at any stage of its development or life cycle are usable for studying HCC development and/or screening of modulators of HCC in vitro cell culture. It is unclear as to how one of skill in the art could use the invention as claimed given the unpredictability regarding any cell acquiring a Hepatocellular carcinoma phenotype. Hence the rejection is maintained.

Conclusion

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No claim allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner *Kelaginamane Hirianna Ph.D.*, whose telephone number is **(571) 272-3307**. The examiner can normally be reached Monday through Thursday from 9 AM-7PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, *Joseph Woitach Ph.D.*, may be reached at **(571) 272-0739**. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). When calling please have your application serial number or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. For all other customer support, please call the USPTO call center (UCC) at (800) 786-9199.

/Robert M Kelly/

Primary Examiner, Art Unit 1633